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ransplanting rice in Burma

- Far East Feed Use Up

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# Far East Feed Needs To Rise With Increasing Meat Output

By ALVA L. ERISMAN
*Foreign Commodity Analysis, Grain and Feed*
*Foreign Agricultural Service*

PLANNED INCREASES in certain sectors of Japan's and Taiwan's livestock and poultry industries should boost imported feedgrain needs in 1977. Indeed, Japan's livestock numbers and imports of feedgrains will show a steady—if not spectacular—increase well into the 1980's.[1]

Japanese Government and feed industry officials estimate the country's mixed feed consumption will increase about 5-7 percent to about 19 million metric tons in Japan fiscal year 1977 (April-March), in order to keep pace with expanding livestock and poultry production gains.

The increase in feed requirements, together with the roughly 5 percent increase in fiscal 1976, reverses the downward trend of 1974-75, when mixed feed consumption declined from over 18.1 million tons (1973) to 16.8 million tons (1975).

Japan's livestock industry is tailored to fit the national conditions of the country—limitations of space severely restrict domestic output of feedgrains and roughage. The livestock industry is almost entirely dependent on imported feedstuffs, and the most efficient converters of feed—poultry and hogs—have spearheaded the remarkable growth in Japan's livestock industry.

During 1960-73, Japan's consumption of mixed feed increased sixfold—from 2.9 million to 18.1 million tons—while the percentage of concentrates in the weight of mixed feed also rose. Imported feedgrains currently comprise about 60 percent of total mixed feed ingredients, with the United States supplying roughly 60 percent of Japan's feedgrain imports (an estimated 14.5 million tons in JFY 1976/77).

While Japan's livestock industry, as a whole, is recovering from the post-oil-crisis slump, there are trouble spots within certain areas. Import duties on pork, for example, were suspended in 1975, allowing large quantities of pork to enter the country, causing stocks to rise and the domestic price for hogs to decline. The duty was reinstated in October 1976, and the number of hogs on feed increased.

However, it is believed that the increase may be sufficient to depress domestic prices when these hogs are marketed in mid-1977, forcing another cutback in hog numbers. The number of hogs on feed after July 1977 will largely determine whether Japan increases its feedgrain imports by 5 or 7 percent.

The layer industry in Japan is suffering from overexpansion—egg production currently far exceeds demand. The Government is attempting to alleviate the situation by restricting expansion of larger flocks (3,000 birds or more). The industry is currently looking to processed and frozen foods as an outlet for surplus eggs.

Japan's broiler flock increased by almost 75 percent during 1970-76 to 93 million birds (as of February 1, 1976), and the outlook remains bright for continued growth. Japan's consumption of meat has been steadily rising, while that of rice has declined.

PER CAPITA CONSUMPTION of fish—meat's major competitor—increased 16 percent during 1960-74, but availability of fish is expected to decline. According to one Japanese trade firm, the extension of U.S. territorial waters to 200 miles offshore, coupled with new quota agreements with other nations, would reduce Japan's annual mackerel catch from 2.1 million tons to 600,000 tons.

The loss in mackerel for consumption would be roughly equivalent to twice Japan's current production of broiler meat. The decline would also reduce the availability of fishmeal, which by law must comprise at least 3 percent of mixed feed ingredients. A relaxation of this requirement would probably result in the substitution of soybean meal for fishmeal.

[1] **Based on Mr. Erisman's trip to Japan and Taiwan, November 27 to December 21, 1976.**

Beef production in Japan increased by only 3 percent between 1970 and 1976, and while potential may exist for more rapid growth, the potential is not likely to be realized in the near future. Beef production has not been streamlined in recent years to the extent that has been true for poultry, swine, and dairy enterprises.

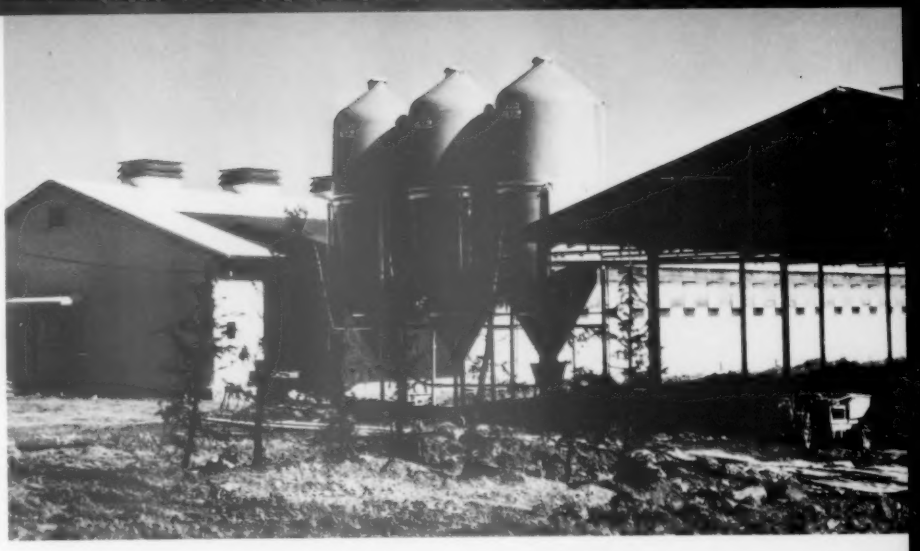
For example, in one feedlot, calves are placed on feed at 10 months of age and are not marketed until they reach about 567 kilograms, usually at 27 months of age. The Japanese claim this type of feeding operation is necessary to produce tender beef. However, baby beef also produces tender meat, and seemingly would be more harmonious with Japanese requirements for a high-concentrate, fast turnaround feeding enterprise. One Japanese firm reportedly is considering establishing a feeding operation of this latter type that would involve about 15,000 head of cattle annually, all of which would be imported from the United States.

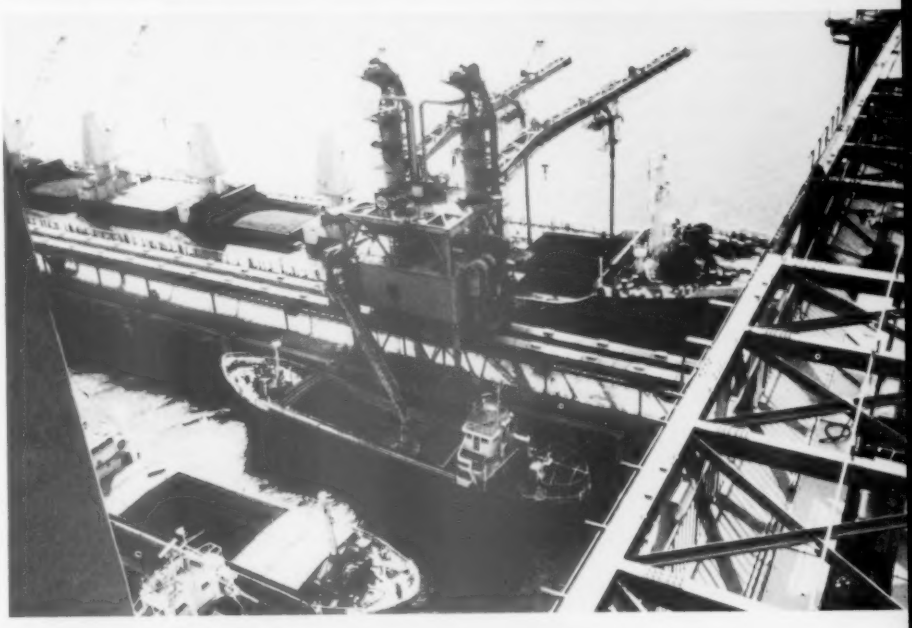
The Japanese Ministry of Agriculture and Forestry (MAF) estimates that Japan's mixed feed consumption will increase by 3 percent annually through 1980. However, trade and industry officials suggest this projection may be somewhat conservative.

Kagoshima and Fukuoka Prefectures each manufacture and consume over 7 percent of Japan's mixed feed. Urbanization in Fukuoka is conflicting with agriculture, with the result that mixed feed consumption in this area is expected to increase by about only 2 percent annually through 1980.

However, Fukuoka is not only a major port for feedgrains, but also an unloading point for all wheat and barley imported for consumption in the island of Kyushu. Elevator capacity in Fukuoka is being expanded from the present 165,000 tons to 200,000 tons in 1977. As a result, discharge of all grains is expected to increase by about 6 percent annually—from 1.08 million tons in 1976 to 1.6 million tons in 1984.

Kagoshima is Japan's leading producer of livestock and poultry, and is planning to increase output by 51 percent by 1981. Roughly 60,000 tons of silo capacity is available at the port, which is currently being enlarged to hold 91,000 tons. The storage capacity of Kagoshima was expected to be increased from the present 25-day supply to a 45-day supply of feedgrains in March 1977, when new elevator con-





*From top: New, fully automated layer building, housing 32,000 layers, in Fukuoka, Japan; unloading feedgrains in Kagoshima, Japan, a major discharge point for imported feedgrains and soybeans; manual closing of mixed feed bags at plant in Taichung, Taiwan.*

struction was completed.

The Japanese are trying to minimize the high risk to feed manufacturers and livestock producers associated with almost total dependence on imported ingredients for feed. The MAF, traders, feed manufacturers, and livestock producers established the Mixed Feed Stabilization Fund in February 1975, for the primary purpose of building compensatory funds to subsidize manufacturers when abnormal hikes of feed prices occurred.

This fund was reorganized in May 1976 and renamed the Mixed Feed Supply Stabilization Organization (MFSSO). Its functions were broadened to include the stockpiling of feedgrains, as a buffer against possible disruption in deliveries, and its objective is to eventually have the facilities to stockpile about a 1-month's supply of Japan's total feedgrain requirements.

Japan currently has 3.8 million tons of storage capacity (including foodgrains, feedgrains, and oilseeds). The MFSSO plan to stockpile a 1-month supply of feedgrains, as a hedge against possible disruption, will require a 25 percent increase in storage—divided equally between silos for corn and sorghum and sheds to house bagged barley.

The stabilization fund and stockpiling do reduce risk, but are expensive and inflate both costs for livestock producers and prices to consumers. In addition, mixed feed prices are fixed—all manufacturers are forced to sell at the same, regulated price. Increases over and above subsidy are permitted only if the price of three major ingredients increases by an average of 15 percent or if the price of any one ingredient rises by 8 percent or more.

Like Japan, Taiwan's production and consumption of livestock and poultry products have increased rapidly over the past 15 years, in response to demands of a growing population with steadily rising per capita incomes, which grew by 7 percent in 1976 and are expected to increase an additional 11 percent this year.

Swine and poultry numbers will continue to grow from their totals at the end of 1976 (5.5 million head and 63 million head, respectively), although the growth may not be sufficient to necessitate a doubling of feedgrain imports by 1986, as planned by Taiwanese officials. Bullish factors in the livestock and poultry industry include:

- Animal raising is becoming more commercialized, with the increase in livestock numbers largely dependent on imported feedstuffs;
- More imported feedgrains and less domestically produced concentrates—particularly sweet potatoes—are being fed to hogs;
- Feedgrains should continue to become increasingly important, particularly if the support price for rice remains high;
- Taiwan plans to increase hog slaughtering by 1.6 million head—almost 30 percent—and to double poultry numbers by 1980.

However, some concerns also exist within the industry, including:

- The population growth has slowed;
- The income elasticity for livestock and poultry products apparently is low, compared with that of the Japanese;
- Plans for a major increase in hog numbers assume that Japan will continue a large market for Taiwanese pork;
- Even the new feedmills are low-capacity, labor-intensive operations, with the result that milling capacity could lag behind a rapid increase in demand for mixed feed;
- Attempts to establish viable beef and dairy industries have not been entirely successful.

The United States will undoubtedly remain Taiwan's dominant supplier of feedgrains, although the U.S. market share of total feedgrain imports may decline. U.S. shipments of corn to Taiwan in 1975/76 totaled 733,000 tons, and exports of 700,000 tons are forecast for 1976/77. Taiwan has been looking to other suppliers recently, a practice likely to continue.

Unlike other feedgrains and soybeans, sorghum can be freely imported in Taiwan. As a consequence, importers have begun to purchase comparatively large quantities of sorghum, all from non-U.S. suppliers.

Previously, sorghum was imported exclusively for the manufacture of alcoholic beverages, but recent purchases exceed the quantity needed for this particular purpose.

## SOVIETS REPORT RECORD WINTER WHEAT AREA, BARLEY AND CORN PLANTINGS DECLINE

The 1977 Soviet winter wheat area will probably be the largest on record, and a record winter wheat crop appears possible. Barley and corn plantings, however, are expected to be below those of 1976.

The Soviet newspaper *Izvestiya* reported that as of late April 23.2 million hectares of winter wheat had been top dressed, indicating that the total harvested area could be as much as 10 percent larger than the previous record in 1971 and a third greater than last year's plantings. Most of the increase in area is in the Ukraine, where the 10.2 mililon hectares reportedly seeded would be a record for that republic. Moldavia, Byelorussia, and the North Caucasus are also claiming larger areas of winter wheat than in 1976.

The 1973 crop set the current record for winter wheat output in the USSR. The harvest of 49.4 million tons was achieved from an average yield of 2.70 tons per hectare on 18.3 million hectares. Assuming a harvested area in the neighborhood of 22 million hectares this year, and a yield of 2.25 tons per hectare—which was the average of the ninth Five-Year Plan (1971-75)—the 1977 crop would amount to about 50 million tons.

Since winterkill has been below normal, barley area in the USSR this year probably will be reduced. (Spring barley is commonly planted where fall-seeded wheat failed to survive the winter.) This, plus the plan to seed corn for grain on only 3 million hectares, could have implications for feedgrain imports in 1977/78.

The corn area planted in 1976 was about 4.5 million hectares, or 50 percent more than planned for this year, but bad weather at the end of the season permitted only 3.3 million hectares to be harvested. Barley area in 1976 was a record high at 34.3 million hectares, compared with an average of 28.4 million in the preceding 5 years.

Despite the generally good-to-excellent conditions reported for the 1977 winter grain crop in the USSR, there may be a few problems caused by the unusually high amount of moisture that has been present since the season began last fall. In the Ukraine, accounts of outbreaks of downy mildew and lodging in winter wheat and rye have appeared in the press. Weediness is contributing to the lodging.

# A Look at Poultry Markets In the Pacific Islands

*Prospects are good for expanding U.S. poultry meat sales in the Pacific, says the author, who made an indepth survey of the market in late 1976.*

By STEVEN D. YODER
*Foreign Market Development, Dairy and Poultry*
*Foreign Agricultural Service*

AMONG the small but growing markets for U.S. poultry and poultry products are the islands of the Pacific, where demand is being enhanced by population growth, favorable consumer incomes, and expanding tourism. Chances are good that this U.S. trade will continue to grow in the future as new products find their way into marketing channels and trade barriers are reduced in markets such as Fiji, which now imports no U.S. frozen poultry.

The United States already holds virtually all of the poultry meat markets in Western Samoa, Guam, and the Trust Territory and supplies about half the combined imports of Tahiti and New Caledonia. However, so far U.S. frozen poultry meat has been shut out of the Fiji market by a ban on all poultry imports from the United States except for canned products.

Opportunities for marketing egg and egg products are limited, on the other hand, by present or projected self-sufficiency in egg production (at higher prices) on most of the islands.

All told, the region imported $4 million worth of U.S. poultry and poultry products in calendar 1975, compared with total imports that year of around $7.5 million. U.S. exports of frozen whole broilers dominate this U.S. trade, although frozen broiler parts, canned chicken, frozen whole turkey, and turkey parts are also imported. So far very small amounts of further-processed poultry products are imported into the region, but some tradespeople interviewed did express interest in these products.

Combined population of the six island groups totals around 1.2 million, which is boosted considerably by the yearly influx of a little over 600,000 tourists. These tourists go mainly to Tahiti, Fiji, and Guam and stay an average of 5-6 days. Their more sophisticated tastes indicate a need for high-quality poultry products, whereas local populations of the lower income islands of Wester Samoa, Fiji and the Trust Territory (except for Saipan) are major markets for less expensive cuts, such as turkey tails, chicken backs and necks, and soup packs.

U.S. poultry and poultry products enjoy various degrees of access to all islands. Duties on poultry meat imports vary from 35 percent in Fiji—where only canned products have access—to 34 percent in Western Samoa and 7 percent in Tahiti; the rest of the islands permit duty-free imports. Typical shipping charges for refrigerated containerloads from the U.S. west coast range from 22 cents per kilogram to Tahiti to 31.9 cents to New Caledonia.

Most U.S. competition in the area comes from New Zealand, Australia, and the European Community (EC). Importers are very aware of international price differentials and watch for week-to-week changes. Although they recognize the high quality of U.S. products, many of these importers have only limited U.S. contacts. Especially in Melanesia and Polynesia, they are most likely to have contact with Australia and New Zealand exporters and greater familiarity with Oceania and European coordinated trading arrangements through marketing boards or other means.

Modern supermarkets owned by importers or importing companies serve as the main retail outlets for imported poultry meat. These importers also wholesale to sellers in outlying areas and the restaurants and institutional caterers. One-to-three such importers will serve the major and more heavily populated islands of each market. However, in the Trust Territory each of six districts forms a market and has its own importers.

As far as domestic production is concerned, all islands are aiming for self-sufficiency in both eggs and poultry meat. There appears to be little chance of achieving this goal for poultry meat, however, with Fiji and Tahiti the only islands having much current production.

In general, tradespeople interviewed expressed interest in U.S. products, including further processed items not prevalent in the market to date. They indicated that U.S. products were generally competitive with those from other suppliers and valued for their high quality. However, some confusion apparently exists over U.S. poultry inspection and grading. An explanation convinced importers that the procedures insure wholesome and quality products.

**Tahiti (French Polynesia).** A French possession, Tahiti has a population of nearly 130,000, a 2.7 percent rate of natural population increase, and a relatively high per capita gross national product of $2,680 (1975 figures). Tourism is an important contributor to the national economy with slightly over 100,000 tourists visiting the island group each year.

Together with New Caledonia, Tahiti in 1975 imported around 1,497 metric tons of U.S. poultry and poultry products valued at $2 million, out of a combined total import by the two French territories of 3,311 tons valued at $4.7 million.

ALTHOUGH facing competition here from both the EC and Oceania, the United States recently has dominated the market by virtue of better prices and high-quality products. Competitors' poultry meat generally carries a reputation of lower quality and less attractive packaging.

Transport and storage conditions are very good in this market, with ocean transport charges from the U.S. west coast running at a relatively low 22 cents per kilogram.

Among the comments by tradespeople:

- Sturdy, strapped and waterproof boxes for shipping are desirable to preserve quality and appearance of product until unpacking.
- A food and beverage manager for a leading hotel expressed interest in further-processed turkey and other poultry products.

*Continued on page 6*

**New Caledonia.** Also a French possession, this island group has a population of 132,000, a 2.6 percent rate of natural increase, and a high per capita gross national product of $5,010. Reflecting its relative wealth, New Caledonia has by far the highest per capita yearly poultry consumption of the islands—16 kilograms compared to 9-11 for other island groups, and only 2.3 for Western Samoa and 1.4 for Fiji.

Whereas Tahiti is currently getting much of its poultry products from the United States, New Caledonia relies largely on the EC, New Zealand, and Australia for its imports of broilers, broiler parts, and other poultry products. However, there is opportunity for expanding U.S. sales here given the island's high per capita income, transportation rates from the United States that are under 33 cents per kilogram, and absence of Government restrictions on poultry meat imports. Several importers showed interest in lining up U.S. agents or suppliers and would shift to them if prices were right.

**Western Samoa.** In 1975, this island had a population of 159,000, a 3 percent rate of natural population increase, and a per capita gross national product of $250. Poultry meat imports from the United States totaled nearly 362 tons worth $222,000 in 1975—virtually all of the poultry meat imported.

Transportation and storage facilities in the market are adequate, although tradespeople said better packaging would help maintain quality during transfer from shipping containers to importers' freezers.

The import duties are 34 percent for fresh and frozen poultry meat and products and 36 percent for eggs and egg products. The Government's policy is to reduce total value of imports. However, this may or may not adversely affect U.S. poultry exports since each importer receives a lump sum import value authorization. The importer can then allocate the quota among the products he decides to import. The price of poultry meat compared to other meat would favor continuing imports of poultry as a protein source.

**Fiji.** Estimated population here was 570,000 in 1975; the rate of natural population increase, 2.3 percent; and the per capita gross national product, $640. Imports of poultry meat and eggs in 1975 totaled 685 tons valued at $700,000, but none came from the United States in light of the continuing ban on imports of all U.S. product unless canned. Efforts are being made to obtain access for cooked uncanned product.

Even though domestic poultry output is on the rise, demand also is going up in line with population and income growth and increased tourism. Fiji is encouraging tourism, envisioning a 10 percent annual growth in it between 1976 and 1980. In 1975, 162,000 tourists visited the islands, coming mainly from Oceania, Canada, and the United States.

Also, poultry consumption is being encouraged by the Government's policy of holding poultry prices steady while allowing the prices for other meats to increase.

**Guam.** Population of Guam in 1975 totaled 111,000, while the rate of natural increase was 3 percent, and the per capita gross national product, $4,130. The United States supplied all of Guam's 1975 imports of 1,248 tons of poultry valued at $1.2 million. Tourism, totaling 240,000 visitors in 1975, is higher than on any of the areas visited and—together with growth in population and income—should keep demand for poultry meat on the rise. Tourism and the presence of U.S. military personnel and families (about 35,000) are expected also to work for increased acceptance of further-processed chicken and turkey products.

Guam has a local poultry industry that currently produces 113 tons of poultry meat a year, compared with total consumption of 1,360 tons. However, like other Pacific islands growth in the industry is expected to be inhibited by high feed costs, the large size needed for an efficient broiler slaughter facility, and competitive prices of imported U.S. broilers.

U.S. eggs are sold in Guam and these sales are expected to continue in the future.

**Trust Territory of the Pacific Islands.** Population of the six Trust Territory Districts totaled around 116,000 in 1975; per capita gross domestic product was $450; and the number of tourists was 66,000. The United States supplied virtually all of the 907 tons of poultry valued at $1 million imported in 1975.

Saipan, the present administrative center of the six districts, is the most important market for poultry meat and eggs in the Territory. It has the highest rate of tourism, as well as the highest per capita income.

## BERGLAND TO VISIT SIX ASIAN NATIONS

Secretary of Agriculture Bob Bergland will leave June 3 on a trip to six Asian nations, during which he will deliver a major address to the World Food Council, which meets in Manila June 20-24.

In addition to the Philippines, the itinerary will include Japan, Hong Kong, Indonesia, Singapore, and Malaysia. Secretary Bergland will meet with trade and agricultural officials in the various capitals. In Singapore he will join in a conference of U.S. Agricultural Attachés posted throughout East and Southeast Asia.

At the World Food Council in Manila, the Secretary will be meeting with ministers of agriculture from many countries throughout the world. In his speech to the Council, he will discuss the U.S. role in world agricultural developments and global food programs.

In Indonesia and Malaysia, Secretary Bergland will visit palm producing areas, whose output is a growing factor in world vegetable oil production and trade. In Hong Kong, he will visit agricultural areas in the New Territories and confer with major importers. In Japan, the Secretary will discuss trade problems and future food needs in that market, which at $3.7 billion is the U.S. farmer's largest export customer.

## Argentina Links Grain Support to Export Price

Argentina has announced that for 1977/78 grain crops, support prices will be set at 80 percent of f.o.b. export prices, the 10 percent export tax (temporarily lifted for wheat) will be removed for all grains, and credit facilities will be increased. With the support prices dependent upon both f.o.b. prices and the exchange rate, growers reportedly are concerned that the actual level of support that can be counted upon will remain somewhat indefinite. Calculation of the wheat support reportedly will take into account the Chicago futures market.

Historically, Argentina's average internal grain prices have ranged from 50 to 71 percent of export prices. The past spread between internal and export prices has been largely the result of export taxes, differential exchange rates, and state trading.

# Grain Self-Sufficiency By 1980? Czech Hopes Dim

FOLLOWING a disappointing year in 1976, Czechoslovakia has lowered its 1977 grain goal from 10.3 million tons to a more reasonable 10.0 million. Barring unusually bad weather, the Czechoslovaks should reach this year's target, but that means production would have to average 11.5 million tons annually during the last 3 years of the Plan if they are to meet the grain goal of the current Five-Year Plan (1976-80). Given present technologies and harvesting methods, it is unlikely that Czechoslovakia can fulfill its aspirations of grain self-sufficiency by 1980, reports Nicholas M. Thuroczy, U.S. Agricultural Attaché, Vienna.

Last summer's drought, preceded by freeze-delayed plantings, reduced 1976's grain production to 9.35 million tons —nearly 1 million tons below target— and to about the same level as 1975's poor crop. The shortfall in grain production, which normally contributes about 20 percent of Czechoslovakia's gross farm product, led to a sharp increase in grain imports, including about 800,000 tons from the United States. Total crop production, covering all commodities from grains to vegetables, was 6 percent under 1975 output and 15 percent below the 1976 goal.

These shortfalls also adversely affected livestock production (see box) as the country's gross agricultural output tumbled 2.7 percent last year, down 8 percent from planned levels.

Wheat production in 1976 rose 600,000 tons to about 4.8 million tons while barley outturn totaled 2.7 million tons—400,000 tons below 1975's level. The drought caused widespread damage to the 1976 corn crop. Only a half million tons were harvested, substantially below the 843,000 tons produced in 1975.

Prospects for the 1977 grain crop appear relatively good. A total of 2.77 million hectares is expected to be planted in grains, up slightly from the 2.73 million hectares in 1976. Autumn plantings of wheat and rye, usually accounting for about 60 percent of the total grain crop, were completed on schedule, although planting delays occurred in some areas because of wet soil.

In 1977, fertilizer application is expected to rise 3 percent to about 240 kilograms per hectare, and the use of pesticides could increase about 5.5 percent. But problems of old farm machinery, in need of repairs, still plague Czechoslovak agriculture, Thuroczy says.

Nonetheless, the country should reach the 1977 grain goal of 10 million tons which includes 4.8 million tons of wheat, 3.2 million of barley, and 800,000 of corn—the latter helped by a 20 percent increase in planned corn area to 180,000 hectares.

Czechoslovakia usually imports 1.0-1.5 million tons of grain from the Soviet Union and Eastern Europe. However, because of the below-plan 1976 output, the country turned to the West during the year's second half for an additional 1.0-1.2 million tons of grain. Of these imports, about 600,000 tons of corn and 200,000 tons of wheat were imported from the United States because wheat and corn imports were not available from Hungary. Czechoslovakia's total grain imports last year reached an estimated 2.3-2.5 million tons, one of the highest levels in recent years, Thuroczy reports.

In 1977, the country will still need about 1.5-2.0 million tons of grain imports to meet the demand from its livestock industry. Currently, it appears that Soviet and East European imports will cover most of the country's extra grain needs, but corn is expected to remain in short supply. So, Czechoslovakia may again seek U.S. corn later this year.

## RED MEAT UPTURN SEEN IN CZECHOSLOVAKIA

CZECHOSLOVAKIA'S livestock production—normally accounting for 55 percent of the country's gross farm output by value—was mixed in 1976 as red meat supplies declined for the first time in recent years, and cattle and pig numbers increased. The outlook for 1977 points to an upturn in red meat supplies, largely because of continued expansion in the hog sector.

The 1 percent decline in red meat supplies to an estimated 1.375 million metric tons in 1976 is attributed to beef as average slaughter weight of cattle declined. The number of slaughter calves dropped 6,000 head to 22,000. Slaughter of pigs, however, increased about 1 percent to an estimated 744,000 tons last year.

The 1977 red meat supply situation appears mixed, as well. To meet the lowered target of 1.44 million tons, producers will have to deliver about 53,000 tons more of slaughter animals than last year. This will be difficult, especially for cattle because of the intended buildup of the cattle herd and tight bulk fodder supplies. But this year's outlook for pork is more favorable because of increased numbers of breeding sows. An additional 40,000 tons of pigs should be slaughtered this year as pork, which represents more than half of the country's red meats should replace any shortfall in beef supplies.

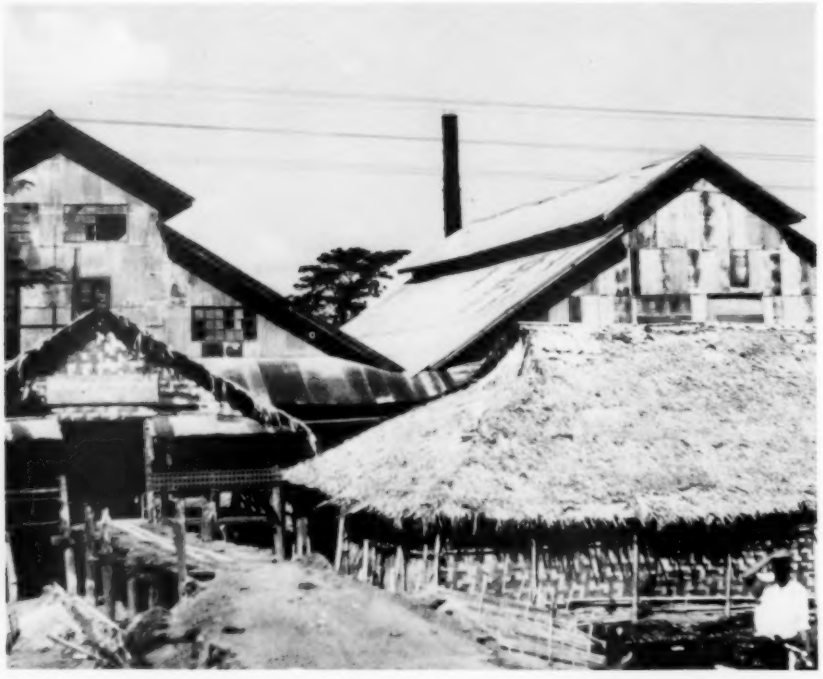
The number of sows rose 15,000 last year to 526,000, pointing to good prospects this year in pork production. Total pig numbers increased about 2 percent in 1976 to about 6.8 million head, indicating more pigs should be available for slaughter this year.

Cattle numbers jumped about 2 percent last year to an estimated 4.7 million head, slightly above the planned level. A smaller increase may occur this year. Since the country still needs to expand its cattle herd for future meat supplies, cattle will probably be withheld from slaughter again this year.

On the other hand, the number of cows dipped slightly last year to about 1.9 million head, following a larger decline in 1975. The shortfall in grains and in bulk fodder during the summer drought complicated the dairy situation. The troubled dairy industry is not likely to improve in 1977 as cow numbers are expected to remain unchanged. The problem, though, is not so much the decline in cow numbers, but rather the relatively low milk yields.

# Two Good Crops in a Row Boost Burma's Rice Exports

By THOMAS H. LEDERER
*Foreign Demand and Competition Division*
*Economic Research Service*



*Top, a Burmese rice mill, and above, a rice paddy bordered by the famed tree-lined road to Mandalay. Burma's rice output and trade are on the rebound this year, following setbacks in the early 1970's.*

With a good rice crop last year, and another recently harvested, Burma is making a partial comeback from its dismal rice exports of recent years. At the same time, other rice exporting nations are trying to assess Burma's future role in the volatile world rice market.

So far, Burma's exports are about halfway back to the more than 1 million metric tons shipped each year in the early 1960's, when the country was Thailand's constant challenger for the No. 1 position among Asian rice exporters. The key to further growth is Burma's ability—and willingness—to revitalize an industry now stifled by excessive Government regulations, inadequate infrastructure, and lack of production incentives. Also, given strong domestic demand for rice, Burma will have to score steady gains in production just to keep exports at current levels.

In 1976/77 (April-March), this export trade probably totaled around 600,000 tons, milled basis, compared with 425,000 tons in 1975/76 and an unusually low 196,000 tons the year before. (On a calendar year basis, 633,000 tons were shipped out in 1976, compared with only 292,000 in 1975.)

Another 300,000 tons or so of rice also moves out illegally each year to neighboring Bangladesh and India. The two countries may have taken less of such rice last year, however, because of good rice harvests of their own.

Despite somewhat lower prices recently, the expansion in export volume boosted Burma's foreign exchange earnings from rice to an estimated $80 million in the first 8 months of 1976 from $52 million in the same period of 1975.

The Burmese Government, meantime, has set an export target of 1 million tons by 1980. Such an export goal seems reasonable given the good production potential in Burma, but it will not be achieved unless the Government provides adequate price incentives. Also, large exports cannot be maintained over the long run without additional investment in infrastructure, extension, and research, as well as in market development to locate new outlets for Burmese rice.

Lending credence to the Government goal is the sizable rice export trade once enjoyed by Burma. Burma traditionally has been one of the world's largest rice exporters, shipping over 1.5 million tons in its peak years of

1960/61 and 1961/62.

With increasing domestic demand for farm products, together with some lackluster harvests, Burma lost this dominant position, and exportable surpluses in the mid-1960's began a decline that was to continue for almost a decade. By 1974/75, these exports had plunged to a low of 196,000 tons.

Only in the last 2 years has Burma produced harvests large enough to permit a rebound in export trade.

The first breakthrough, in 1975/76, was a bumper harvest of 9.1 million tons as a result of the exceptionally good weather that prevailed throughout most of Asia that season. Then, in 1976/77, the country managed a 200,000-ton gain in production to a record 9.3 million tons from 5.2 million hectares of paddy.

ORIGINALLY, it had looked as if the 1976/77 crop might go as high as 9.8 million tons, but a lack of tractor fuel reportedly led to lower than expected harvested area. The shortage constrained the use of tractor power on the large tracts of newly reclaimed land in the coastal areas of the Irrawaddy Delta.

Unseasonal rains in lower Burma during the harvest season may have damaged some of the gathered paddy, causing a decrease in quality and quantity. The Burmese Government reports, however, that the damage was minimal.

Despite this smaller-than-expected gain, and the chronic problems in Burma's rice industry, the country appears to have much potential for future expansion in production.

For one thing, yields are still unusually small, even by South Asian standards, averaging 34 baskets, or 289 kilograms per hectare. (Basket is equal to 46 pounds and is the traditional unit of measure.) Yields vary from a low of 4 baskets per hectare to a high of 24, with the higher yields often simply the result of increased density of plant population, which is generally low. This improved practice, along with increased use of fertilizer, could boost yields as much as 50 percent on some land.

There is also potential for increasing production through continued reclamation of land lost to salinity problems in the fertile delta area of lower Burma. This loss represents an estimated 283,300 hectares and more than offsets the121,400-hectare gain in rice plantings in Upper Burma, where agricultural development has been accelerated in the last few years.

Production also could take off should investment in rice cultivation be increased and the excessive Government control of rice marketing be eased.

As conditions now stand, each producer must sell a required amount of paddy to the Government, which has a countrywide procurement quota based on demand from urban areas, rice-deficit rural areas, and the export market. The contribution of each farmer is determined locally by a people's council based upon previous production and present crop reports. Prices are set by the Government. Any surplus can legally be sold directly to consumers, but only within the farmer's own township. Interregional movement of rice privately and trade with middlemen other than the Government are prohibited.

Resulting Government procurements of rice have represented about one-third of total paddy production in recent years.

And even collecting, processing, and distributing one-third of the crop has proved almost impossible given the country's present infrastructure. Consequently, the Government has scaled down its paddy procurement target for 1976/77 from 3.7 million tons to 3.2 million. Some observers believe that 3 million tons would be a more realistic target but that even this level would strain the country's storage, transportation, and milling systems.

Rice storage and transportation facilities in Burma vary in quality, but as a whole they are inadequate, with the Government reporting that 5-8 percent of the collected paddy is lost each year due to lack of adequate storage and transportation facilities.

As in the past, rice and other commodities move to market largely by way of the 5,000 miles of inland waterways, including the three main rivers that flow north to south the length of the country: The Irrawaddy, the Sittang, and the Salween.

Ground transportation dates largely from British colonial times, and—although considerable repairs were done following the immense damage wreaked during World War II—there is a great need for development, modernization, and everyday maintenance. Rail lines have only about 2,000 miles of track plus equipment that is old and in general disrepair. Highways are in need of resurfacing, widening, and all-around improvement since many—including the famous tree-lined road to Mandalay—were built during colonial times. Motor vehicles are limited in number and usually of World War II vintage.

To compete successfully in the world rice market and to provide the needed domestic supply levels, the Burmese also will need to modernize milling operations. The rice milling industry is antiquated, and the milled rice suffers in quality. Most of the mills are reported to have been built between 1902 and 1939 and still have the original machinery supplied by the United Kingdom and Germany. These mills are usually steam powered, with rice hulls used as fuel.

In 1959, the Government began to construct new mills to improve production and quality of the milled rice. Since then, 22 new mills have gone into operation, boosting the total number of rice mills operating in Burma to about 1,813. Of these mills, 288 are estimated to be capable of high-quality production with a capacity of 50 to 70 tons

*Continued on page 12*

BURMA'S RICE PRODUCTION AND TRADE, 1951-77[1]

| Year | Area sown | Production | Milled production | Domestic procurement | Exports |
|---|---|---|---|---|---|
| | *1,000 hectares* | *1,000 metric tons* | *1,000 metric tons* | *1,000 metric tons* | *1,000 metric tons* |
| 1951 | 3,703 | 5,391.7 | 3,612.4 | — | 1,168 |
| 1961 | 4,217 | 6,821.5 | 4,570.4 | — | 1,841 |
| 1971 | 4,975 | 8,162.3 | 5,468.7 | 2,984 | 761 |
| 1972 | 4,978 | 8,175.4 | 5,477.5 | 2,233 | 684 |
| 1973 | 4,862 | 7,350.6 | 4,931.6 | 1,231 | 244 |
| 1974 | 5,089 | 8,602.3 | 5,762.5 | 1,502 | 199 |
| 1975 | 5,177 | 8,584.0 | 5,751.3 | 2,713 | 196 |
| 1976 | 5,183 | 9,144.9 | 6,178.1 | 2,942 | 425 |
| 1977[2] | 5,178 | 9,306.5 | 6,235.3 | 3,255 | 600 |

[1] Burmese fiscal year, April-March. [2] Preliminary estimate.

# AUSTRALIAN FARM OUTPUT AND EXPORTS AT NEW HIGH IN 1976/77

Sparked by recovery in world markets for livestock products, the value of Australia's farm output and exports is expected to hit record levels in 1976/77.

The gross value of Australia's farm output in 1976/77 is estimated at $A6.385 billion,[1] 6 percent higher than that of last year. Improved returns for a number of major commodities will more than offset an expected decline in the volume of farm production associated with unfavorable seasonal conditions in southeastern parts of Australia earlier in the season.

Both the volume and value of Australia's farm exports are expected to rise in 1976/77, with the value of shipments estimated at a record $A4.625 billion—a rise of roughly 12 percent over last season's.

Returns in Australian dollars for exports of most major agricultural commodities improved following the 17.5 percent devaluation of the Australian dollar last November, although the benefits have been reduced to some extent by the subsequent revaluations.

Australia continued to press hard last year to keep its overseas markets open. In addition, considerable effort was put into developing and expanding alternative markets. Greater diversification of markets has been given top priority.

Probably the main reason that Australia gives high priority to keeping its foreign markets open is that agricultural exports amount to over 70 percent of the gross value of farm production and 45 percent of total Australian exports.

Australian farm exports have been adversely affected by numerous labor disputes on the waterfronts, as well as in other sectors. Work stoppages have made it difficult for exporters to meet shipping schedules, and many exporters have sustained heavy losses. Perhaps more important is that marketing charges and ocean freight rates have increased substantially in the past few years, cutting Australia's competitive edge in world markets and reducing returns to farmers.

Australia's economy continues to perform sluggishly, and the sought-for recovery has been slow in coming. The year 1977 promises to be the fifth successive one with an inflation rate of over 10 percent.

Devaluation is expected to generate a significant improvement—from deficit to surplus—in Australia's balance of payments, and will initially stimulate the profitability of most export- and import-competing industries. But the effects on aggregate economic demand and the real level of economic activity is much more difficult to assess, and will depend on the strength of world demand for Australian exports, overseas investment in new projects, and domestic consumer and investment demand.

Currently, economic expansion in 1976/77 will likely be at the same modest level of the past fiscal year, when real growth was less than 2 percent.

A review of Australian commodities follows:

**Livestock and livestock products.** Increases in the value of Australia's wool and meat exports are expected to more than offset the decline in dairy exports in 1976/77, putting the value of livestock and products at $A2.381 billion.

Prior to the devaluation, wool prices were improving as a result of stronger demand and reduced world supplies. The gross value of Australia's wool production in 1976/77—forecast at 725,000 metric tons—is expected to be $A1.2 billion, with sharply higher prices more than offsetting a small decline in output. (Wool production in 1975/76 was 754,000 tons.)

Unfavorable climatic conditions have resulted in a decline in sheep shorn in Australia and reduced yield per head. With strong demand through Christmas, the Australian Wool Corporation (AWC) had been able to make sales from stocks. Since mid-January, however, stocks have increased from 1 million bales to 1.2 million. Early export projections of $A1.5 billion have been trimmed to $A1.2 billion.

The Government authorized the AWC to increase the floor price of wool by the full amount of the devaluation. Consequently, the floor price for the whole average clip was boosted from $A2.34 to $A2.84 per kilogram (clean basis).

The November devaluation of the Australian dollar has given exporters a competitive advantage for beef and veal exports to the more difficult markets. However, the general market situation for Australian beef shipments continues to be dominated by the supply situation overseas and by access to the major markets in North America, Japan, and Western Europe.

Increasing sales to other markets, particularly the USSR and Eastern Europe, have boosted export volumes, but average prices generally remain below those of traditional main outlets.

Saleyard prices for cattle in Australia have been improving in the current season, although they remain relatively low. The gross value of cattle and calves slaughtered in 1976/77 is forecast to rise by 31 percent to $A894 million, despite a slight easing in the recent high slaughter rate and an expected small fall in production, compared with that of 1975/76. The anticipated increase of $A124 million in the value of beef and veal exports reflects higher prices and an increase in shipments to record levels.

Total beef and veal output in 1976/77 is forecast at 1.73 million tons, down somewhat from the 1.783 million tons produced last year.

Among other meat products, mutton and lamb output is expected to decline slightly in 1976/77 to 596,000 tons (compared with 584,000 tons last season). Pork output will increase only marginally to 179,000 tons (176,000 tons last season). Both poultry and canned meat output are expected to hold relatively steady at 205,000 tons and 45,000 tons, respectively, compared with 204,000 tons and 43,000 tons, respectively, in 1975/76.

Export prospects for Australia's dairy sector are not as bright, as supplies are down and world prices remain weak. Exports sales are forecast to drop from $A203.2 million in 1975/76 to $A172 million this year. Milk production is forecast to fall 11 percent in 1976/77 to 5.755 million liters, following a further anticipated decline in dairy cow numbers and a marked drop in milk yields in southern areas after drought conditions early in the season.

Output of manufactured dairy products will be down, and export availability will be much lower. With a smaller proportion of output going into lower priced export markets, and with increases in the domestic prices of many products, aver-

[1] $A1=US$1.0875

age unit returns for milk in the 1976/77 pool will rise and the gross value of dairy production is forecast to increase 3 percent to $A483 million.

Nevertheless, with reduced sales, still rising costs, and generally low prices for exports, incomes of many producers of manufacturing milk are likely to fall.

The dairy sector has been perhaps the most troublesome area for the Australian Government. The dairy industry has been going through a period of extreme hardships, as a result of depressed returns from the export market and reduced production resulting from the drought in the major dairy-producing areas of Australia.

The Commonwealth—together with the States—has been giving support to the industry through the underwriting of manufactured dairy products and through adjustment assistance. But this is primarily an interim measure. One of the Australian Government's highest priorities is the introduction of efficient, long-term dairy marketing arrangements to facilitate adjustment to changed market conditions and to assist the industry in operating on a more prosperous basis. The Government is hopeful that such a new long-term scheme will be ready to operate starting July 1, 1977.

**Wheat.** Australia's 1976/77 wheat crop is currently estimated at 12.0 million tons—the same amount produced last year. Following favorable rains in recent months, early indications are pointing toward an increase in Australian wheat area for 1977 of more than 1 million hectares. The 1977/78 wheat crop is currently projected at 13.5 million tons.

Australia's wheat exports for the 1976/77 marketing year are estimated at 8.9 million tons.

**Coarse grains and oilseeds.** The outlook for coarse grains and oilseeds is somewhat more favorable than it is for wheat. Growth in world demand and continuing low stocks are likely to result in coarse grain prices remaining at around current levels, at least until firmer estimates of 1977/78 production are available.

However, gross returns in Australia are likely to fall, owing to a 20-percent decline in barley production to 2.56 million tons.

The export value of coarse grains has been estimated at roughly $A300 million—approximately the same as last year.

Higher prices, together with increased output, underlie an expected increase in the value of Australia's five specialized domestic oilseed crops to nearly $A39 million in 1976/77. However, oilseeds exports are expected to drop to only about $A1 million, compared with $A16 million a year earlier.

**Sugar.** Australia's sugar output in 1976/77 is estimated at 3.4 million tons (raw value)—well above the record output of 3 million tons achieved during the previous season—the result of expanded production capacity at both growing and milling levels and generally favorable seasonal conditions. The gross value of the sugar harvest will be 6 percent higher than that of last year.

Price prospects on the export market for raw sugar are not expected to be as good during 1976/77 as during last year, but this will be partly offset by a higher volume of exports. World free market sugar prices have been declining this season, owing to world sugar supplies that are expanding faster than consumption, and stocks will rise significantly as a result.

Australia is expected to export 2.4 million tons of sugar —valued at $A595 million—compared with 2 million tons—valued at $A569.8 million—shipped last season.

## PERU'S FISH CATCH STABLE

During the October 1, 1976, to May 6, 1977, period, Peru caught 1.89 million tons of fish, compared with about 1.9 million in the same period of 1975/76. Fishmeal production during the 1976/77 period totaled about 430,000 tons, almost unchanged from the comparable 1975/76 period.

Fishmeal exports during October 1976-February 1977 totaled 250,200 tons, compared with 132,400 tons during the same 5 months of 1975/76.

Peruvian anchovy fishing was discontinued on May 6 in all but one fishing zone. There are reports that full-scale fishing might not be resumed until September or October.

In view of this possibility, the fish catch for calendar 1977 might decline to only 2.5-3.0 million tons, against 3.9 million in 1976. However, the Peruvian Government as yet has not reduced its targeted catch from the 4.0-4.5-million-ton level.

Given the current range in catch possibilities, Peru would be expected to produce between 575,000-1 million tons of fishmeal in calendar 1977, against a total of 849,000 tons in 1976.

Correspondingly, Peru's 1977 fishmeal exports, which for the January-February period were some 112,000 tons, against only 5,700 tons for the comparable 2 months in 1976, is expected to range between 700,000 tons and 1.0 million, against 625,000 tons in 1976.

**Tobacco.** Production of tobacco in 1976/77 is currently placed at 15,400 tons (green weight), compared with the 14,300-ton crop of 1975/76 that was reduced by rain and floods in New South Wales and Victoria. This year's expected production should be a recovery to the 1974/75 level.

**Fruit.** Prospects this season for the Australian fruit industry are mixed. Long-term prospects for exports remain depressed and, consequently, the production base of the main deciduous fruits continues to contract. A small—but temporary—improvement in export returns from apples and fresh pears is expected in 1977. Reduced world availability of dried vine fruits has resulted in markedly improved prices, and—subject to the weather—increased returns to Australian growers.

Overall, a 12-percent increase in the value of Australia's total fruit crop is anticipated in 1976/77, with the export value forecast at $A72 million, compared with $A82 million last year.

Australia's production of apples in 1976/77 is forecast to increase 18 percent to 318,000 tons, compared with 270,000 tons a year earlier. Apricot output will also rise—possibly by as much as 19 percent—to 31,000 tons, compared with 26,000 tons in 1975/76. Pear production, however, is anticipated to drop 8 percent to 129,000 tons.

Total citrus fruit output is expected to decline slightly in 1976/77 to 440,000 tons (444,000 tons in 1975/76).

—Based on a dispatch from
*Office of U.S. Agricultural Attaché, Canberra*

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# Saudi Arabia's Fruit Imports Rising

Saudi Arabia's fruit imports are rising steadily, with uncertain shipments from Lebanon—the traditional source of supply—causing Saudi importers to increase purchases from a number of other suppliers, including the United States.

To aid these and other imports, Saudi Arabia is improving its port facilities and has installed several refrigerated warehouses that will guarantee product freshness on the market.

Purchases from Jordan, Egypt, several Latin American countries, and the Philippines have increased. The United States so far is a relatively minor source of fresh fruit, but is rapidly becoming an important supplier of fruit products. U.S. exports of fruit juice to Saudi Arabia reached $1.8 million in 1976—double the 1975 value—and U.S. exports of canned fruit rose 41 percent to $882,200.

Climbing by about 10,000 tons a year, total fruit imports had risen gradually until 1974, when they jumped to 115,222 tons from 97,211 tons the year before. Imports were expected to continue to climb and reach 135,000 tons in 1976, almost twice the 76,000 tons imported in 1970, to account for 15.2 percent of total fruit consumption.

The increase in Saudi Arabia's 1976 fruit imports occurred despite a considerable decline in purchases of Lebanese apples, which apparently fell to a level close to that of 1971 when only 16,634 tons were delivered. Between 1972 and 1975, average Lebanese apple deliveries were 27,549 tons, but in 1976 they were only 17,500.

Imports of apples from Italy, France, and Greece increased in 1976, but their volume was small in contrast to the supplies that had previously come from Lebanon. Truck shipments of Lebanese apples were made through Jordan in 1976, but deliveries were often delayed or interrupted by military actions.

Showing a steady rise in most years since 1971, Saudi imports of oranges from Jordan and Egypt have pushed imports from 40,492 tons in that year to about 60,000 tons in 1976.

The United States sent 4,100 tons of oranges to Saudi Arabia in 1975, valued at $905,000, but no shipments were recorded in 1976. Jordan and Egypt seem to have filled the gap resulting from smaller Lebanese deliveries.

Distribution of Egyptian oranges from Aqaba to Saudi cities by truck increased as port congestion in Jeddah got worse after 1973. Overland transport may continue despite the relief of congestion in Saudi ports.

Saudi imports of grapes averaged about 4,200 tons in 1971 and 1972, but fell to about 2,750 tons in 1973. Recovery started in 1974 and imports are expected to reach more than 8,800 tons in 1976.

Domestic fruit output also has risen slightly in recent years, mostly from new vineyards planted near urban areas and enlarged orchards in the Asir highlands, but increased production has had little effect on the growth of imports.

Date production reached a peak of 252,000 tons in 1970 and declined slightly to about 245,000 tons in 1976. Output of deciduous fruit increased sharply between 1970 and 1976, thus offsetting the decline in dates. Grape production rose from 12,000 tons in 1970 to about 38,000 tons in 1976. Output of pomegranates, plums, and apricots also increased markedly in recent years. —JOHN B. PARKER, JR., ERS

## Burmese Rice Continued from page 9

of rice per day. About 55 percent of all the rice mills in Burma handle the rice milling requirements of the Government.

One interesting irony in socialist Burma is the efficient capitalist market that has spawned in the country. All the elements of the "invisible hand" are at work in a black market that supplies consumers with a vast array of products, including rice, not otherwise available in the needed quantity and quality. The black market in Rangoon, for example, has more and better quality rice than does the official market. Black market retail prices, although somewhat higher than Government prices, are generally lower than they were a year ago, offering some relief from the high inflation rate of the past few years. Thus, for those urban dwellers with money, there is ample rice of high quality beyond that available through the official market ration system.

These problems notwithstanding, Burma could well make it back to the top echelon of rice exporters, especially if it begins to apply the incentives needed to encourage rice production and marketing. In the meantime, it will be the exporter to watch in the ever-changing "Asian rice bowl."


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